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Iowa Geological Survey

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Director and State Geologist

It is the duty of the Geological Survey to collect, interpret, and report data on basic geologic features of the State. This includes information concerning the quality and quantity of surface and underground water supplies, coal, gypsum, sand and gravel, ceramic clay and shale, limestone and dolomite, raw materials for the manufacture of cement, ore deposits, and other mineral resources. Spurred by the discovery of oil in southeastern Iowa, studies are continuing on the oil and gas possibilities in Iowa, particularly in the southern part of the State. A state-wide program of structural mapping, aimed at discovering structures that may contain oil or may be suitable for the underground storage of natural gas, is being carried on. The geological sections of the extensively amended oil and gas law are being administered. Geological studies of dam sites are made on some of the flood control and recreational prospects of federal, state and county agencies, and reports on the mineral resources of proposed reservoir areas are frequently prepared.

The Survey is the repository for all basic geologic data obtained in the State. These data are continuously augmented by the collection, study, and correlation of drill cuttings and samples from quarries and outcrops. A catalogued library of samples and cores is maintained.

Work under way or recently completed, much of it in cooperation with the United States Geological Survey, may be summarized as follows. Collection and dissemination of data on underground waters, stream flow, sediment loads, lake levels, and other hydraulic data are being carried out on a state-wide basis. A comprehensive water-availability study in central Iowa, and a detailed drilling program in south-central Iowa to map glacial aquifers are in progress. An aeromagnetometer survey along the Midcontinent gravity high that extends through Iowa and a detailed gravimetric study of a portion of this gravity anomaly have been completed recently in preliminary form. Feasibility studies for a car-borne magnetometer survey to supplement the aeromagnetometer survey are under way. A coal reserves report is being prepared. Topographic mapping of the State, by quadrangles approximately 60 square miles in area, is being conducted on a continuing basis. Reports are in preparation on the geology and ground water resources of two counties, and a study of the Osage Series in southeastern Iowa is ready to go to press.

As a partial result of its work, the Survey has published 38 volumes of annual reports and accompanying scientific papers. These publications include special reports and maps covering the geology and mineral resources of all but six of the ninety-nine counties, as well as special reports on mineral production. There are also three technical papers on Iowa coal and eight water-supply bulletins. Geological and mineral resource maps of the State have been prepared. Additional summaries of specialized geological studies have been published in professional journals. These published reports, together with an even larger file of unpublished data, obtained during more than 70 years of continuous study, serve as a reliable basis for up-to-the-minute reports to federal, state, county, and municipal agencies, and to private concerns and individuals who request and need the available information on water supply and other mineral resources of Iowa.

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REVIEWS

Chemistry Problems, Joseph F. Castka. Holt, Rinehart and Winston, copyright 1962. Paperback.

This is a source book for the above average chemistry student. The teacher of CHEM Study will find this an especially useful reference book. Chapter 11 develops the major ideas of atomic and molecular structure along with current theories of chemical bonding. Chapter 12 deals with crystals and solid state. Both chapters 11 and 12 are enhanced by a great many diagrams and illustrations. For those who have not, until recently, been thinking in terms of problems related to bonding, molecular structure and solid state the large number of problems in these areas (with detailed answers) will make this book a valuable addition to the science library.

Floyd Sturtevant

Vanishing Animals, Preserving Nature's Rarities, Philip Street. E. P. Dutton and Co., Inc. Copyright 1963.

This is a book that either scientist or non-scientist might read with interest and profit. Mr. Street covers a wide variety of animals from the great auk to the Komodo dragon. He tells of many animals that are perhaps unknown to most of us but that, nevertheless, deserve our efforts to prevent their extinction. And, if the animal is extinct, might it "live" again? One learns that efforts are being made to bring such animals back again by applying the principle that no animal can be considered completely extinct whose heritable constitution still exists. This constitution, though altered by crosses with other species does exist and by use of present day knowledge of heredity can be brought back! This book will make excellent reading for students in junior and senior high school.

Jean Crane

IOWA SCIENCE TALENT SEARCH

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port from 1949 through 1952, contributing about $21,000 in scholarships to about 196 winners.

The Iowa Science Talent Search is achieving its goal of encouraging potential scientists to pursue science careers. Besides the cash scholarships

Reports from many colleges reveal that honor grade point averages have been earned by about three-fourths of the Talent Search winners. Many have attended Iowa colleges while many others have attended schools throughout the country. Several of the early winners have earned Ph.D. degrees. Some are now working in science and medicine. A large number are still in graduate school and college, but a high proportion are successfully pursuing careers in science.

Literature Cited

F. E. Brown, "Science Talent Searches," Proc. Ia. Acad. Sci., **59**, 63-70 (1952).

"Reports of the Committee on Science Talent Search," **Ibid.**, **69**, 22 (1962).

"State Science Talent Searches," 1962-63, report by Science Clubs of America, 1719 N Street, N .W., Washington 6, D.C.

IOWA GEOLOGICAL SURVEY

(Continued from page 12)

Samples of rocks and fossils are distributed to schools and private individuals upon request. Information, advice, and direct assistance in the increasing development of water and mineral resources are given to the limit of Geological Survey funds and personnel.

FROGS

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utilized to demonstrate most of the basic life processes.

References

Chandler, A. C., and Read, C. P. Introduction to Parasitology. 10th Ed. John Wiley and Sons, Inc. New York, N. Y. 1962.

Kudo, R. R. Protozoology. 4th Ed. Charles C. Thomas, Publisher. Springfield, Illinois. 1963

Manwell, R. D. Introduction to Protozoology. St. Martin's Press. New York, N. Y. 1961

Morholt, E., Brandwein, P. F., and Joseph, A. A Sourcebook for the Biological Sciences. Harcourt, Brace, and World, Inc. New York, N. Y. 1958

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Live frogs may be obtained from E. G. Steinhilber and Co., Inc., Oshkosh, Wisconsin. Cost about $1.00 a dozen.